# General Outline of Pedagogy.

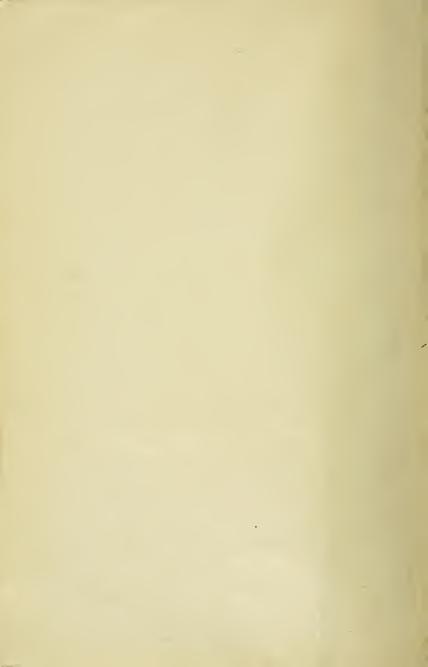
LB 1025 R63 ROARK











#### A

# GENERAL OUTLINE

OF

# PEDAGOGY

# A WORKING MANUAL.

 $\mathbf{B}\mathbf{Y}$ 

RURIC N. ROARK, PH. D.,

Dean of Department of Pedagogy, State College of Kentucky,

Author of "Psychology in Education," and "Method in Education."

LEXINGTON, Ky. 1900.

TWO COPIES RECEIVED.

Office of the

MAY 25 1900

Register of Copyrights

F. 8 10.5

a, 9670 Opr, 16, 1900

SECOND COPY,

62682

COPYRIGHT, 1900, By R. N. ROARK. 

### PREFACE.

This book is meant to be just what its sub-title implies—a working manual. It comes into print as the result of nearly two decades of actual work with teachers in the class-room, in institutes, and on the platform.

It is designed to meet the need of the self-helping teacher, who desires some general guidance and direction; and it is planned also for use by the teacher of Pedagogy in normal schools and colleges.

The Outline is designed to cover broadly all the themes most apt to be presented in a series of lectures or class-lessons upon the subjects of educational economy and educational method. Sufficient latitude is left for instructors and students to give their completed outline such trend and emphasis as may seem fit in view of particular local conditions.

In handling the Outline in lectures or class-work it has been found best to use each topic as a subject for full discussion; requiring the students to take notes of their own to be entered, together with all matter given by the lecturer or teacher, upon the blank pages left after each page of print. It is also strongly recommended that the teacher, using the book all the time he teaches, shall make additional notes and change others already made, in the light of his actual daily experiences in the school room.

The recorded results of the teacher's own thoughtful pedagogical experiments will constitute, for him, one of the best possible works on the art of teaching.

Particular attention is requested to the references given after the main topics, and to the general bibliography at the close. These references are not exhaustive, but are all thoroughly good, and *cover the ground*. Each book and periodical named in these lists should be in every library used by teachers.

R. N. ROARK.



# A General Outline of Pedagogy.

## 11 MANAGEMENT (SCHOOL ECONOMY).

#### General References:

- School Management and School Methods, by Baldwin. D. Appleton & Co., N. Y.
- (2) School Management, by White. American Book Co., Cincinnati, O.
- (3) Philosophy of School Management, by Tompkins. Ginn & Co., Chicago.
- (4) Reports of the Committees (Ten, Twelve and Fifteen) of the Nat. Ed. Association. Irwin Shepard, Winona, Minn.
- (5) Reports of the National Educational Association. Same address.
- (6) Principles and Practice of Teaching, by Johonnot. D. Appleton & Co., New York City.
- (7) Reports of the Nat. Commissioner of Education, Washington, D. C.
- (8) How to Organize and Classify a Country School. W. M. Welch, 120 Monroe street, Chicago.
- (9) School Economy, by Wickersham. Lippincott & Co., Philadelphia.

### 12 Securing the School.

- · 13 The teacher's fitness.
  - 14 Physical. (Is there any law on this point in this State? Should there be? If so, to what effect? Why?)
  - 24 Academic. (In what subjects should the teachers be proficient? What subjects other than the "common branches" should be known? Why?)





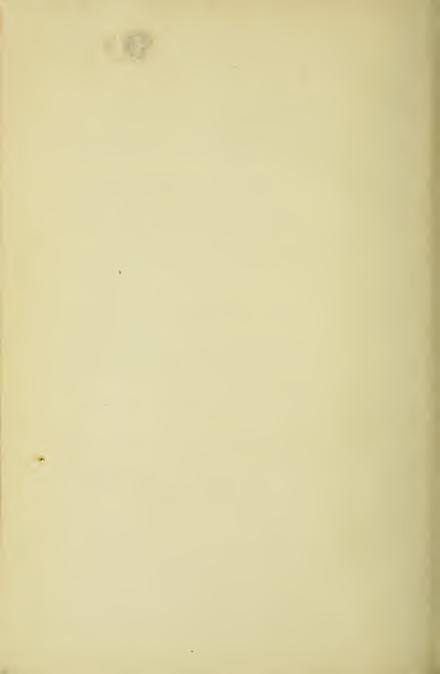


- 34 Professional.
  - 15 Theoretical. (What constitutes a good course in theoretical Pedagogy?)
  - 2<sup>5</sup> Practical. (What constitutes a good course in practical Pedagogy?)
- 44 Cultural.
  - $1^5$  Value of the teacher's general f to the teacher. culture f to the community.
  - 2<sup>5</sup> How may culture be acquired? (Discuss more or less fully here the value of travel, society reading, clubs, summer schools, institutes, etc.).
- 28 Certification of the teacher. (See school law).
  - 1<sup>±</sup> Grades of certificates. { How many are there? How many ought there to be?
  - 24 Legal requirements of applicants.

    "" experience.
    "" character.
    "" the various kinds of fitness discussed above.
  - 34 Times and manner of holding examinations. (These heads should be filled out from the school law. It It is valuable to compare the laws of several States on these matters).
- 33 Making application for the school.
  - 14 In person. (The best way. Why? How should it be done?)
  - 24 By letter. (The student should be required to write a model letter of application),
  - 34 By "proxy."
  - 44 Through teachers' agencies. (These institutions should be fully discussed).
- 43 Making the contract. (See school law).
  - 14 Time of signing.
  - 24 By whom signed?
  - 34 Place of signing.
  - 44 Items to be included.







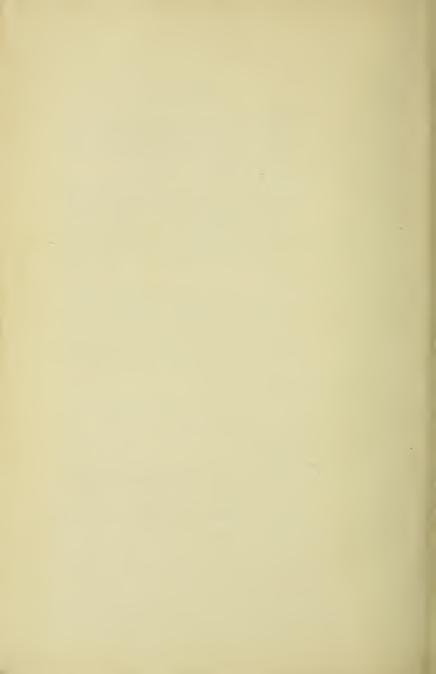


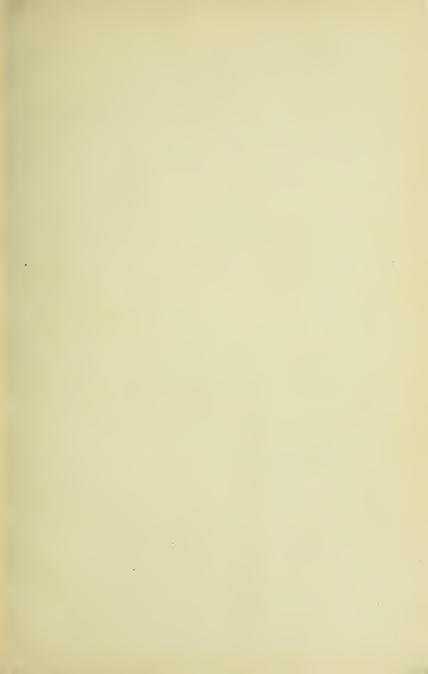


- 15 Salary.
  - 16 Amount per month. (Should the salary be proportioned to the grade of the certificate? Should school money be derived mainly from State or from local taxation? Why?)
  - 26 By whom paid?
- 2<sup>5</sup> Length of school term. (The teacher should always use his utmost endeavor to secure a lengthening of the school term. If it be lengthened by a "spring subscription school" this should be *free*).
- 35 Branches to be taught. (Should other than the "common branches" be taught? Should other than the legally required branches be taught? Why?)
- $4^5$  Pupils' tuition fees—if any  $\left\{ egin{array}{ll} \mbox{Amount per month.} \ \mbox{To whom payable.} \end{array} \right.$
- 55 Employment of assistants. (Sch. Law).
- 65 Employment of a janitor. His duties.
- 75 Condition of house and grounds, (The student should draw up a model contract, embodying these items, and any others that may be needful).

### 22 Taking Charge of the School.

- 18 Securing a boarding place. (What conditions should a teacher demand in a boarding place? Why?)
- 28 Visiting the parents before the term opens. (For what purposes?)
- 38 Inspecting the house and grounds, and seeing that they are in order.)
- 43 The "first day of school"—Temporary organization.
  - 14 Opening exercises. (Devotions; talks from the teacher and trustees).
  - $2^4$  Temporary seating of pupils. (By what arrangement?)
  - 34 Temporary classification.







#### QUERIES AND SUGGESTIONS.

- (1) Should the teacher be at the school house earlier on the first day than thereafter? Why?
- (2) What should be the condition of house and grounds the first day? Why?
- (3) Should visitors be present?
- (4) What should be the tenor of the teacher's opening talk?
- (5) What classes should be called first?
- (6) How many and what classes should be heard regularly, the first day?
- (7) How shall the other pupils be kept occupied while some are being classified?
- (8) What use should be made, the first day, of the last term's register?
- (9) What shall be done in the absence of any record of last term's work?
- (10) On the first day the teacher has the almost undivided attention of the pupils; how shall he manage to hold and intensify it through the term?
- (II) Everything must be carried through with promptness and enthusiasm; *let nothing drag*. This means a most careful planning by the teacher, *beforehand*, for this first day.

#### 32 Conducting the School.

13 Permanent organization. (This should be effective by the end of the second week).

Note.—About this time, also, the teacher should begin to collect material for the exposition at the close of the term. See forward, under "Exposition."

- 14 Assignment of seats. (In what order should the pupils be seated? Why?)
- 24 Grading and classifying the school. (See general references given above).
  - 15 Advantages of putting the school into grades.



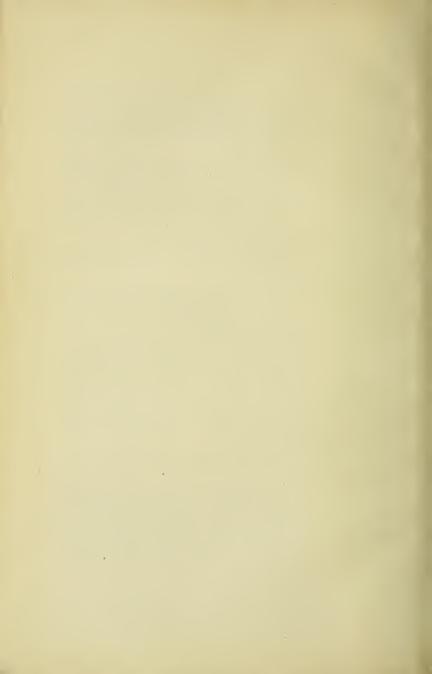




- 16 Proper grading affords opportunity for the completion of definite amounts of work.
- 26 Pupils are thus enabled to make such connection with higher courses as to go forward without loss of time.
- 36 Position in a grade arouses the pupil's ambition and emulation, and thus aids in securing promptitude, regularity, and faithful application.
- 46 Proper grading saves the time and energy of the teacher and pupils, by simplifying and correlating the work.
- 25 Difficulties in the way of grading.
  - 16 Indifference or hostility of pupils, parents, and teacher
  - 26 Lack of books.
  - 36 Irregularity of advancement of the individual pupil, who has been permitted or encouraged to study only what he liked.
  - 46 Irregular attendance.
  - 56 The "spring subscription school." (Why?)
- 35 Suggestive scheme of gradation. (This is planned for the one-room rural school; it can be easily modified to apply to one of two or three rooms).
- References.—The Courses of Study issued by the State Offices of Education in the several States. Those of Wisconsin, Missouri, Kansas, and Virginia are especially recommended. Circular of Information No. 6, 1884, Bureau of Education, Washington, D. C.

Report of Committee of Twelve, Irwin Shepard, Winona, Minnesota.

- 16 The Grades of each Branch. There should be three divisions in the whole school—primary, intermediate, and advanced. In the first two are three grades each; in the last, two grades.
  - 17 Reading. The grading should be done on the basis of the pupil's ability to read. Supple-







mentary Reading should form a most important part of the work from the First Reader up. No regular reader in the series should be used above the fifth grade.

27 Spelling. In all the grades, Spelling should be taught in connection with all the branches. No spelling-book is needed, and no separate class in Spelling.

87 Writing. Writing should constitute a part of the preparatory work in Reading in the first two grades. There should be special exercises for the whole school from the third grade up, at least once a day.

#### 47 Arithmetic.

- 18 Primary Division. No text-book. Fundamental operations begun in Integers and Fractions.
- 18 Intermediate Division. Fractions; Denominate Numbers; Percentage begun.
- 28 Advanced Division. Applied Percentage; Ratio and Proportion; Mensuration.
- 57 Grammar. In the primary and intermediate divisions, Grammar should be incidental to Reading and Language work. The text-book may be used in the highest grade, or in the two highest.
- 67 Physiology. It would be better to use no text-book at all, but to give the instruction by informal talks to the whole school. A textbook may be used and completed in the seventh grade.
- 77 Nature-Study. (See Roark's Method in Education, p. 140). This work should be combined with the out-door Geography (see below) and should be carried through all grades without a text-book, once or twice a week. In the







primary and intermediate divisions the work should be mainly observational; in the advanced division some experimental exercises may be introduced.

87 Geography. In the Primary Division and in the first two grades of the Intermediate, the work should be done in connection with naturestudy. (See above).

The text-book may be introduced in the sixth grade, and completed, as a separate study, in it and the seventh.

## 97 History.

- 18 In the Primary Divison. Oral instruction once or twice a week.
- 28 The Intermediate Division. Stories from history may be read by the pupils, using such books as Eggleston's First Book in American History, and Stories of Great Americans for Little Americans.
- 38 In the Advanced Division. A text-book of U. S. Hist, should be taken up in the seventh grade, and continued, in connection with state history or general history, in the eighth grade.
- 107 Civics. The instruction should be oral, once a week from the fourth grade to the seventh, inclusive. The text book may be used in the highest grade. In the last two grades there should be much illustration of the subject from current events.

# 117 Language Work.

18 Oral.

19 In the Primary and Intermediate Divisions. Informal conversations between teacher and pupils. Committing to mem-







ory and recitation of suitable choice selec-

29 In the Advanced Division. The same work should be continued, and *debating* should be introduced.

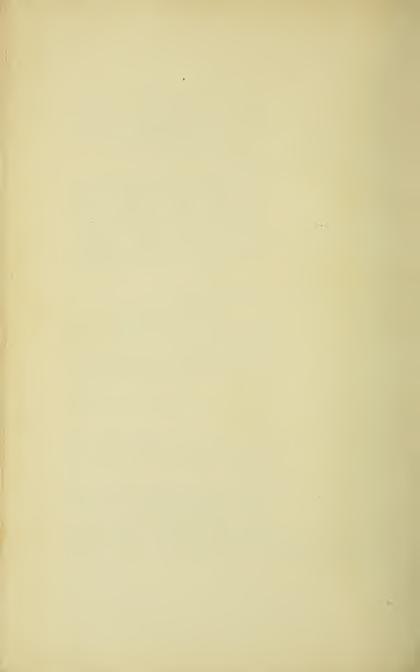
#### 28 Written.

- 19 In the Primary and Intermediate Divisions. There should be constant practice in writing, copying sentences, writing original sentences, and writing of short compositions upon the simplest themes.
- 29 In the Advanced Division. Practice in writing compositions should be continued and some work should be done in textbook rhetoric.

#### 26 The Studies of each Grade.

- 17 Grade I. Chart Grade: 4 to 6 recitations daily; 5 to 8 mins, to a recitation.
  - 18 Reading from chart or primer; writing; spelling—twice daily.
  - 28 Arithmetic. Counting; Reading and writing figures; fundamental operations to 10 once daily.
  - 38 Geography and Nature-Study. Out door, objective, oral instruction—once weekly, or less often.
  - 48 History and Civics. Simple stories, told and read, with illustrations drawn from every-day experiences—once weekly, or oftener.
  - 58 Language. Conversations, with special reference to securing fluency on the part of the pupil. Incidental correction of errors of pronunciation, enunciation, and syntax.

The student should be required to fill out in detail the other grades, after the same manner as shown in  $1^7$  and  $8^7$ . This will







be an excellent drill, even when the teacher must follow a course laid down by the State.

The work of the seventh grade will be hardest to plan theoretically; that of the first and second, hardest to work out in the school room.

- 87 Grade VIII. 4 recitations daily; 15 to 30 minutes to a recitation.
  - 18 Reading. Reading of the best literature, with weekly or twice a week discussions of what has been read. The class should be handled purely as a literature class.
  - 28 Arithmetic. Mensuration; a general review, with numerous *applied* problems.
  - 88 Geography. No separate class; abplica Geography in history and in general reading, especially in the "current events" exercises.
  - 48 History. U. S. History with State or General History.
  - 58 Civics. Use of a simple, clear text-book. Study of theory and *practice* of national and State governments.
  - 68 Language Elementary Rhetoric, with practice in composition, alternated with work in technical Grammar. Forensic exercises once a week or once in two weeks.

Notes.—The discussion should bring out clearly the difference between grading and classifying.

In putting any scheme of gradation into practical effect, the teacher should study carefully how he can save time by combining two or more grades in certain studies, and by combining or *correlating* studies. The following references on *correlation* will be found very suggestive:

Herbart and the Herbartians, by De Garmo. Charles Scribner's Sons, New York City.

Report of the National Educational Association for 1890,







p. 200. Irwin Shepard, Winona, Minn.

Report of the Committee of Fifteen. Same address.

Rein's Outlines of Pedagogy. E. L. Kellogg & Co., New York City.

Report of the Commissioner of Education for 1893-4, Vol. I. Washington, D. C.

Educational Review, Vols. IX, X, XI.

Reading should be used as the chief basis of grading the school, but it should be "checked up" by Arithmetic.

A pupil, therefore, who is poor in Reading or Arithmetic should be placed in the grade corresponding to his degree of advancement in these, even if he be quite advanced in some other subjects. (Why?)

No ''cross-grading'' should be allowed. With patience and persistence any apparent need for it can be overcome.

34 Daily program.

15 Principles and suggestions.

- 16 A program should show times for study as well as times for recitation.
- 26 No lessons should be assigned for home study below the fourth grade. (Why?)
- 36 The youngest pupils should be heard in recitation first of a morning; the most advanced, next. (Why?)







25 Suggestive program of daily exercises.

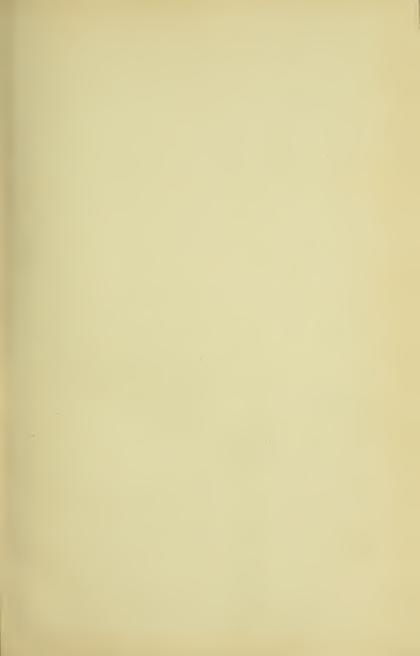
							STUDY	7.			
From	To	Mins.	Mins. EXERCISES.	I.	11.	III.	IV.	Λ.	VI.	VII.	VIII.
8:15	8:30	15	Opening Ex.								
06.0	20.0	ı	Chart		Prepare	Prepare	Review	Geog	Geog	Review	Review
06:6	00:0	,	Clark		Reading.	Reading.	Reading.		0	Arith.	Arith
8:35	8:40	5	First Reader.	Writing.		3	3	ä	:	3	:
8:40	8:50	10	Second Reader. Drawing.		Writing.		Arith.	;	3	3	3
8:50	9:15	25	VII Gr. Arith "Busy Work." Drawing	"Busy Work."		Writing,	Arith.	ž	3		Hist.
9:15	9:40	25	VIII Gr. Arith.	Recess.	Recess.	Recess.	Writing. Drawing.		Review Arith	History.	
9:40	9:50	10	Third Reader.	Recess.	Recess.	Recess.		Review Reading.	Review Reading.	Review Reading.	Lit.
9:50	9:50 10:05	15	Fourth Reader. figures	Copy figures	Prepare Num. Work	Prepare Prepare Num. Work Num. Work.	Prepare Reading			3	3
10:05	10:25	20	VI. Gr. Arith. "Busy Work." Writing on Prepare Board.	"Busy Work."	Writing on Board.	ork.	3	Writing.		Writing.	3

General Recess.

Students should be required to fill out other parts of the program.

At this point should come the discussion of marking for recitation and conduct; the use of school registers and class books; and the use of monthly and term report cards.







- 23 School Government. In addition to the references given on the first page, the teacher is directed to the following: New York Teachers' Monograph No. 7, New York City. Abbott's Gentle Measures in the Management of the Young; Harper Bros., New York City. Democratic Government in the School, by Ray; Public School Publishing Co., Bloomington, Ill. The Review of Reviews, Vol. 20, p. 673, New York City.
  - 14 Principles and Suggestions.
    - 15 There should be few, if any, set rules. (Why?)
    - 25 Love and sympathy lie at the basis of all successful school government.
    - 35 No pupil will behave better than the teacher.
    - 4<sup>5</sup> The teacher must have absolute *self-control* and be inflexibly *just*.
    - 55 All pupils should be treated as ladies and gentlemen until they prove themselves otherwise.
    - 65 Never punish by assigning lesson-tasks.
    - 75 When punishment is needed, let it be sure and prompt. (Here there should be a full discussion of punishments, including the subject of "pupil self-government").
  - 24 Special cases of discipline.
    - 15 In room management. (Here there should be a full discussion of the best methods of dismissing and calling school, dismissing and calling classes, use of signal bells, military marching, &c.).
    - 25 In play-ground management.
      - 16 The teacher on the play-ground. (Why should the teacher be on the play-ground? Should he take part in the games? Why? Should he direct the sports? Why? Refer to Mann's School Recreations and Amusements; American Book Co., Cincinnati, O.).
      - 26 Games and sports to be prohibited.
         17 Those requiring strength only.







27 Those endangering life or limb.

37 " that cultivate the gambling instinct.

47 " that permit unwise mingling of boys and girls.

36 Games and sports to be encouraged.

Refer to ''Games for Schools and Gymnasia,'' by Schaeffer; Freidenker Pub. Co., Milwaukee, Wis. School Recreations and Amusements, by Mann; American Book Co.

17 Those requiring skill as well as strength.

27 "which best develop the lungs and all the muscles.

- 37 Those which involve cultivation of social amenities between the pupils. (A general regulation may be made that the *front* of the school grounds belongs to boys and girls alike; one side of the grounds to girls alone, the other to boys alone. If this be adhered to, most problems of intermingling of boys and girls will settle themselves. Much may be done at the lunch hour to cultivate the social courtesies).
- 46 The play-ground and the neighborhood.

17 Prevention of trespassing by pupils.

27 "Go as far as you like, so you are in place at the end of the recess." (Is this a safe rule?)

3<sup>5</sup> On the road to and from school. (The legal re sponsibilities of the teacher for conduct of pupils on the road should be fully discussed).

16 Fighting.

26 Trespassing.

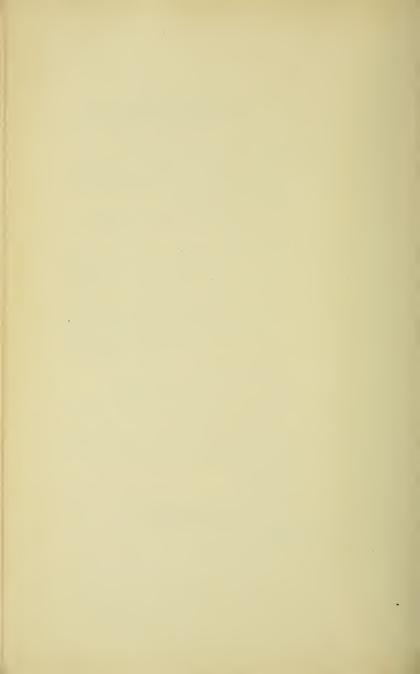
36 Loitering.

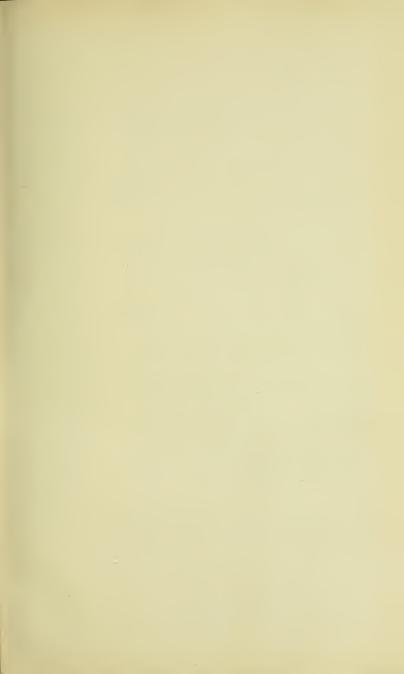
(What shall be done in each case?)

34 Sources and occasions of disorder.

1<sup>5</sup> Physical.

16 Uncomfortable seats.

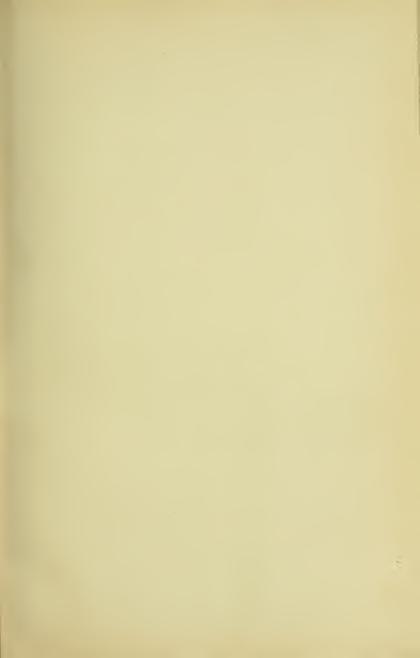






- 26 Poor heating and ventilating.
- 36 Uncomfortable clothing.
- 46 Dirty, littered floor.
- 56 Ugly surroundings in nouse and grounds. (Why?)
- 66 The water-bucket, when kept in the room. (Why?)
- 2<sup>5</sup> Psychical.
  - 16 Lack of interest and enthusiasm on the part of the teacher.
  - 26 Failure to follow the program.
  - 36 Public punishment of pupils.
  - 46 Rasping voice of the teacher.
  - 56 Nervous or fidgety manner of the teacher.
- 44 Helps to good order. (See "School Management," by White; American Book Co.).
  - 1<sup>5</sup> Physical.
    - 16 Handsome, well-kept grounds and building. (The students should be required to describe the best attainable country school-yard and building).
    - 26 Proper heating and ventilating. (The best modes of heating; the placing of the stove, if one is used; and the simplest effective means of ventilating should be discussed. The teacher should clearly understand what degree of heat, amount of moisture, and number of cubic feet of fresh air are required for health).
    - 36 Proper seating. (Single or double desks? Seats and desks connected or separate? Adjustable desks and seats. Nothing about either with a hinge on it. Why? Ink-wells, waste-holders, &c.).
    - 46 Drinking facilities. (What kind of vessel should water be kept in? Where should it be kept? Why? What sort of drinking vessels shall be used?)





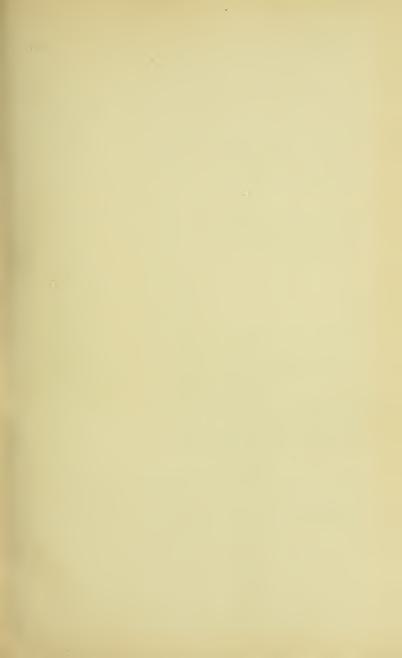


### 25 Psychical.

- 16 Aesthetic surroundings in the room. (Discuss the value of properly tinted walls, pictures, flowers, books, &c. For material for schoolroom decoration, address Perry Pictures Co., Malden, Mass.).
- 26 The teacher's *smoothly directed* activity, energy, and enthusiasm.
- 36 A carefully made, carefully followed program.

  The best recipe for good order is, "Something for each one to do at a certain time, and each one doing it at that time."
- 46 A proud feeling of ownership of the school by the pupils—an *esprit de corps*.
- 56 The human voice, properly used, is one of the best possible means of control in the school-room.
- 66 The personal appearance of the teacher in quiet, dignified bearing and dress, is also a potent aid in control.
- 66 The teacher's firmness, self-control, and impartiality.
- 76 Full and accurate scholarship on the part of the teacher.
- 86 Methods of entertainment and instruction by other means than regular class-work.
  - 17 Opening exercises. (Rightly used, these can be made one of the most potent means of securing regular and prompt attendance, arousing an abiding interest in school-work, and giving instruction not easily to be had in any other way).
    - 18 General principles and suggestions.
      - <sup>19</sup> The opening exercises should both entertain and instruct. They should be so conducted as to stimulate all right interests.



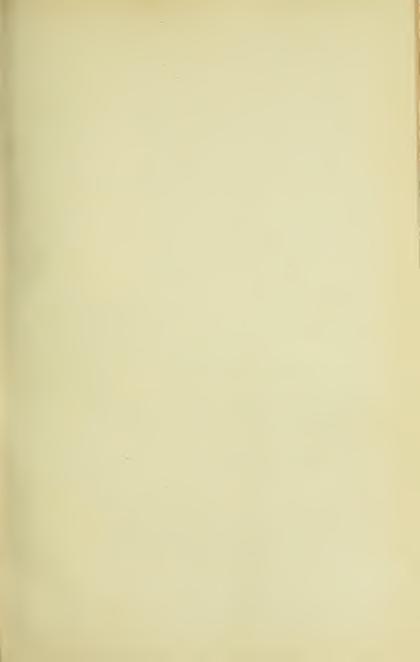




- 29 The patrons should be encouraged to attend.
- 3º Various persons in the community should be called on occasionally for a song, a piece of instrumental music, an interesting talk, or an exhibition of photographs of interesting places, &c. In such ways may the school and the community be more closely correlated.
- 49 Talks upon manners, hygienic living, ethical conduct, the value of culture, &c., should be frequent features of these exercises.
- 28 Suggestive (general) program for Monday morning.
  - (1) Song.
  - (2) Devotions.
  - (3) Music.
  - (4) Report of the news of the preceding week, given by pupils of Grade VIII.

    (One may report the political news of U. S.; another, foreign political news; another, scientific progress; another, educational news, &c.).
  - (5) The teacher adds a few words of comment, bespeaks good work for the week beginning, makes such general announcements as may be necessary, and closes the exercises.
- 27 Observance of special days.
  - 18 The celebration of special days—arbor day, bird day, birthdays of statesmen, writers, inventors, discoverers, scientists,—is growing deservedly popular. Such celebration may be made of great service.







- 28 Suggestive program for "Bird Day."
  - 19 Display of pictures of birds. (Pictures may be had, in natural colors, very cheaply, from A. W. Mumford, Chicago, Ill., publisher of Birds and All Nature).
  - 29 Reading by the teacher—with comments —of the State law relative to the killing of birds.
  - 39 Reading, by an advanced pupil, of "An Early Blue-bird," from Thompson's Poems (published by Houghton, Mifflin & Co., Boston Mass.)
  - 49 Recitation by smaller pupil.
  - 59 Singing of an appropriate song.

The following references are given from which the teacher may obtain additional helps and hints on opening exercises and observance of special days:

Morning Exercises and School Recreations, by Mickens. H. R. Pattengill, Lansing, Mich.

Special Day Exercises, same address.

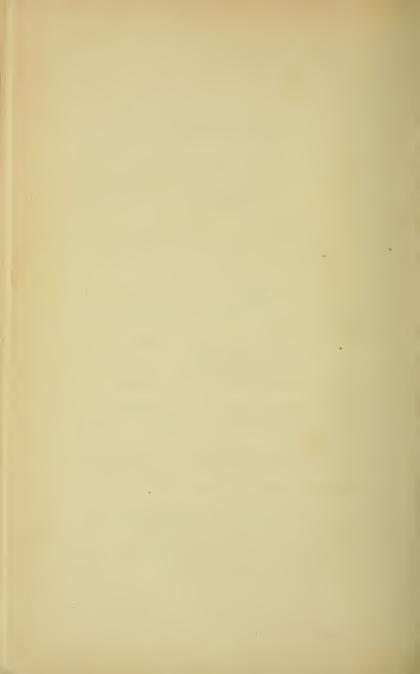
School Recreations and Amusements, by Mann. Am. Book Co.

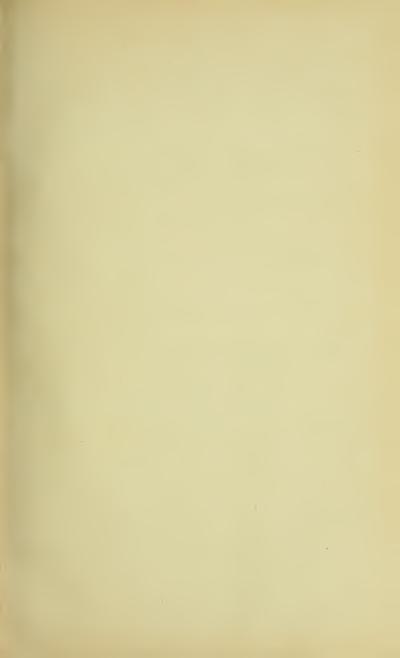
School Interests and Duties, by King, same address.

Bible Readings for Schools, by Schaeffer. Am. Book Co. "Entertainments." (See p. 6 of Catalog of March Bros., Lebanon, Ohio).

Under same head see also catalog of E. L. Kellogg & Co., New York City, and catalogs of other publishers.

- 42 Closing the School: (See references just above).
  - 13 General suggestions.
    - 14 The work should increase progressively in difficulty and amount from the first to the *last day*; there should be no ''letting down'' toward the close.
    - 24 The "last day of school" should be the fullest, best day of all. (See below under 23).







S<sup>4</sup> The public should be urged to attend the last day's exercises.

# 23 Special features.

- 14 "Exhibitions." (The best modern theory and practice are against the old-fashioned school exhibition. Why? If one is given it should be made to bring in money for the use of the school).
- 24 "Expositions." (Why are these better than exhibitions?) Refer to Holbrook's New Method, C. K. Hamilton, Lebanon, Ohio.

## 1<sup>5</sup> Purposes.

- 16 To show as far possible the actual work done and improvement made by each pupil during the term.
- 26 To enlarge and dignify the work of the school.
- 36 To enlist and make permanent the interest of the community in the school.

## 25 Material.

- 16 Sources.
  - 17 Outlines—in all subjects, especially History, Geography, Civics, Physiology.
  - 27 Diagrams and analyses in Grammar.
  - 37 Written language work.
  - 47 Spelling lists, in written spelling.
  - 57 Penmanship specimens.
  - 67 Drawings, made in all subjects, but especially in language and nature-study.
  - 77 Maps, made in Geog. and Hist.
  - 87 Collections.
    - 18 Botanical: Plants, bark, buds, leaves, flowers, fruits, seeds.
    - 28 Geological: Rock-forms, clays, sand, soil, fossils, ores.
    - 38 Zoological. Cocoons, insects, &c.







- 97 Apparatus. Simple pieces made by the pupils to illustrate elementary physics.
- 10<sup>7</sup> Hand-work in clay-modeling, wood-carving, &c.
- 26 Collection of material. Written work in all subjects, maps, drawings, &c, should be handed in by the pupils regularly, beginning the second or third week of school, as a part of their required lesson-duties. All specimens should be kept by the teacher, or under his direction, each pupil's work being kept to itself, carefully labeled.

All work should show *clearly* by *whom* prepared, *when* prepared, and *how* prepared. See the "New Method" above referred to.

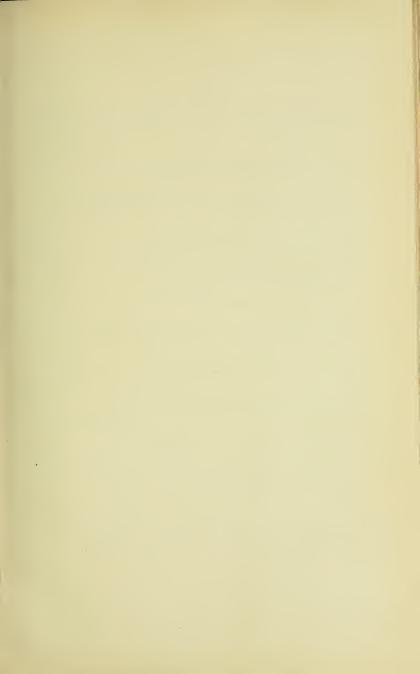
36 Display of material "Exposition Day." The accumulated material of each pupil should, as far as possible, be arranged to itself on desk or table, in such order as to show that pupil's progress throughout the term. Maps, drawings, herbarium sheets, &c., may be hung on the walls.

The pupils should be drilled beforehand how to explain to visitors the work and its arrangement.

- 44 The "Last Day." The last day should be marked by the successful carrying out of a carefully planned, carefully prepared program, consisting of music, recitations, essays, a *debate*, and an address from the teacher or some other fit person. The exercises of the pupils should have been well led up to by their forensic work throughout the term, and should constitute an exposition of that work.
- 52 The Teacher, the School, and the Community; their interrelations. This is a broad and inexhaustible topic, and may be discussed, as time allows, under the following general sub-heads:

13 Legal duties of the teacher.







- 23 Duties of the teacher to school and community, not required by law.
- 33 Legal duties of community to the school and the teacher.
- 43 Duties of the community not required by law.
- 5³ Improved modes of electing trustees, and of certificating and electing teachers.
- 63 Ideal organization of schools into township, county, and state systems.
- ¶3 Mutual relations and helpfulness of home, school, pulpit, Sunday school, libraries, &c. The following references are indicated:

School and Society, by Dewey. Chicago Univ. Press. Social Phases of Education, by Dutton. 'The Macmillan Co., New York City.

The Social Mind and Education, by Vincent. Same publishers.

Report of the Committee of Twelve. Irwin Shepard, Winona, Minn.

Indexed references to the sub-heads given above, or similar ones, in the Reports of the Nat. Ed. Association. Same address.

Indexed references to these sub-heads in the Reports of the Commissioner of Education, Washington, D. C.

#### 21 Methodology.

General references:

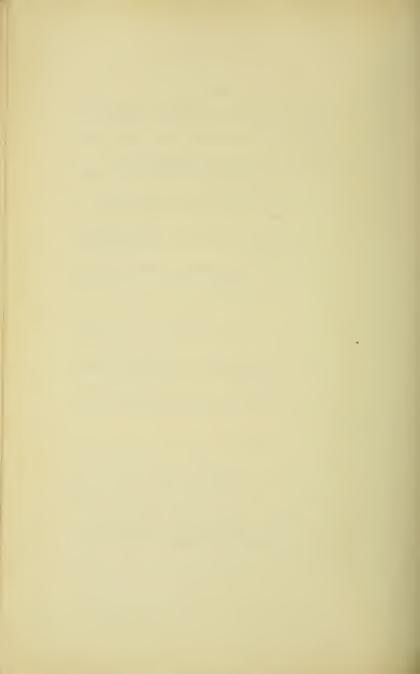
Method in Education, by Roark. Am. Book Co., Cincinnati, Ohio.

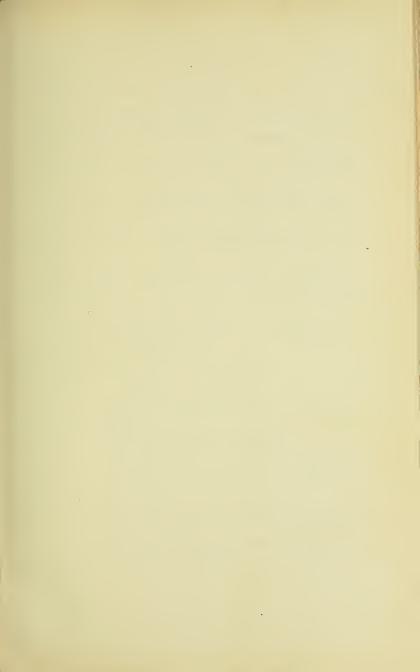
Normal Methods of Teaching, by Brooks. Sower & Co., Philadelphia.

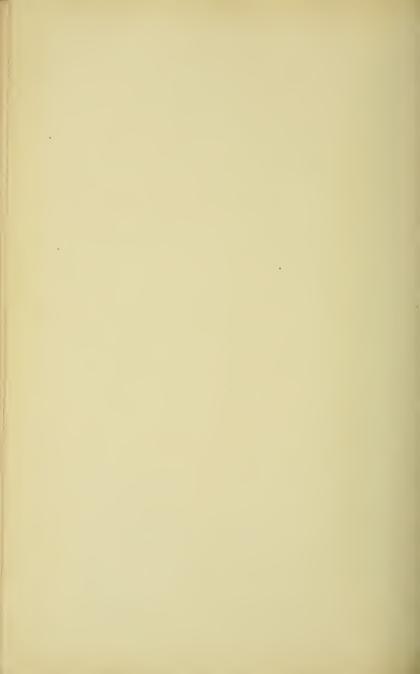
A Manual of Pedagogics, by Putnam. Silver, Burdett & Co., Boston.

Waymarks for Teachers, by Arnold. Same address.

A Primer of Pedagogy, by Putnam. H. R. Pattengill, Lansing, Mich.







The Institutes of Education, by Laurie; p. 179. Macmillan Co., New York City.

The Philosophy of Teaching, by Tompkins. Ginn & Co., Chicago.

Quincy Methods, by Patridge. E. L. Kellogg & Co., New York City.

Studies in Pedagogy, by Morgan. Same address.

General Method, by McMurry. Public School Pub. Co., Bloomington, Ill.

Special Methods in the various branches. Same address. Psychology Applied to Education, by Compayre. D. C. Heath & Co., Chicago.

Essentials of Method, by De Garmo. Same address.

Methods of Mind Training, by Aiken. Am. Book Co.

Manual of Object Teaching, by Calkins. Same address. Psychology Applied to the Art of Teaching, by Baldwin. D. Appleton & Co., New York City.

Elements of Pedagogy, by White. Am. Book Co.

Talks on Teaching, by Parker. E. L. Kellogg & Co., New York City.

# $1^2$ Psychology as the Basis of Method.

References:

Psychology in Education, by Roark. American Book Co., Cincinnati, O.

Elementary Psychology and Education, by Baldwin. D. Appleton & Co., New York City.

Psychology Applied to the Art of Teaching, by Baldwin. Same address.

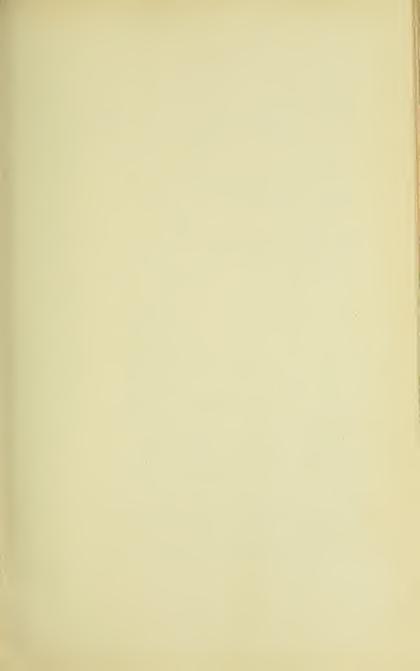
The Study of Children, by Warner. MacMillan Co., New York City.

Mental Faculty, by Warner. Same address.

The Study of the Child, by Taylor. D. Appleton & Co., New York City.

Proceedings of the Illinois Society for Child-Study. A. W. Mumford, Chicago.







Psychologic Foundations of Education, by Harris. Appleton & Co., New York City.

- 13 Brief outline of Educational Psychology.
  - 14 Conditions of mind action.
    - 15 Physical conditions.
    - 2<sup>5</sup> Psychical conditions.
      - 16 The state of consciousness.
      - 26 Attention. (Def.; Importance; how secured).
        - 17 Involuntary.
        - 27 Voluntary.
        - 37 Expectant.
      - 36 Habit. (Def.; Value; kinds to form; how formed).
  - 24 Powers of the mind.
    - 15 The intellect.
      - 16 The senses.
      - 26 Memory.
      - 36 ludgment.
      - 46 Imagination.
    - 25 The feelings.
      - 16 Love.
      - 26 Sympathy.
      - 36 Ambition.
      - 46 Desire of approbation.
      - 56 Curiosity.
      - 66 Conscience.
        - (The importance of these as *motives* should be fully discussed),
    - 35 The will. (Will should be discussed in relation to motives and character).
  - 34 Operations of the mind.
    - 15 Acquisition—through senses and memory.
    - $2^{\scriptscriptstyle 5}$  Assimilation—through judgment and imagination.
    - 3<sup>5</sup> Expression—through language and conduct.

      (For full discussion of these, see Roark's *Psychology in Education*, p. 155 and following).







23 Classification of school studies and exercises on the basis of Psychology. (See Roark's Psych. in Ed., p. 258.

14 As to mental powers cultivated.

1<sup>5</sup> For sense-observation. Nature-study and Geog. Object work in all Physiology. [branches. Drawing, clay modelings.

35 For judgment. Arithmetic. Technical Gram.
Nature-study—the "why" and "how" of common things.

 $4^5$  For imagination.  $\begin{cases} \text{Geography.} \\ \text{History.} \\ \text{Literature.} \end{cases}$ 

5<sup>5</sup> For the feelings. Nature-study (curiosity). Reading and Literature. Biography and History.

65 For the will—the same as for the feelings.

The student should rearrange these, making a list of the studies first, and placing after each the faculties cultivated by it. A list should be made, also, of the studies that cultivate the greatest number of faculties.

24 As to operations of the mind exercised.

15 Acquisitional studies — answering the questions "what," "when," "who," "where."

25 Assimilational—answering the questions "why" and "how".

35 Expressional—those cultivating language, manual skill, and character as shown in conduct.

The student should make out the list of studies and exercises under each of these heads. (Refer to Roark's *Method in Education*, p. 96). Studies may also be classified as *utilitarian*, disciplinary, and cultural.







## 22 General Principles of Teaching.

References:

Roark's Method in Education, p. 22.

Roark's Psychology in Education, p. 265.

White's Elements of Pedagogy, p. 97.

Baldwin's Psychology Applied to the Art of Teaching, Chap. 28.

Parker's Talks on Teaching. E. L. Kellogg & Co., New York.

Rein's Outlines of Pedagogy, p. 100. Same address.

De Garmo's Herbart and the Herbartians, pp. 130, 141. Principles and Practice of Teaching, by Johonnot.

Appleton & Co., New York City.

- 13 The processes of teaching should conform to the order and laws of individual growth.
- 28 All the powers of the body and all the faculties of the mind must be developed, and trained to proper functioning.
- 38 The work and contents of the learner's mind must be brought to adequate expression.
- 48 All teaching must keep in contact with the learner's interests.
- 5<sup>3</sup> Practical application should be made of the things learned.

## 32 Method of the Lesson.

Refer to-

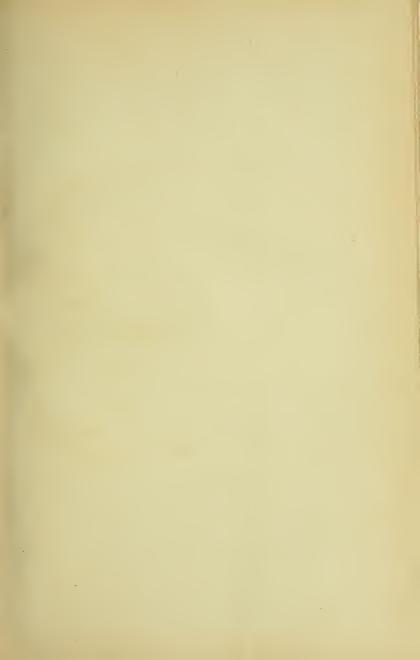
Roark's Method in Education, p. 40.

The Method of the Recitation, by McMurry.

See indexes of the references under "Methodology," above.

- 13 Assigning the lesson—designating a definite portion of subject matter to be acquired and assimilated. (Discuss fully the length of the lessons; "preliminary drill;" page and topic methods of assigning lessons, &c.).
- 23 Preparation of the lesson.







- 14 On the part of the teacher. (What preparation should the teacher make, day by day, for conducting recitations?)
- 24 On the part of the pupil—acquiring and assimilating the matter assigned. (Discuss the best time of preparing lessons, and the best way of preparing them. One of the teacher's most important functions is to show his pupils how to study).
- 33 Recitation of the lesson—expressing the facts acquired and the results of their assimilation.
  - 14 Purposes of the recitation.
  - 24 Modes of conducting a recitation. (Under these heads should be discussed the difference between conducting a recitation and hearing a lesson; the respective advantages of the question and answer, and topic methods: the modes of questioning:

the respective advantages of the question and answer, and topic methods; the modes of questioning; the purposes of "drills," reviews and examinations, and how to attain these purposes).

## 42 Methods in the Several Branches.

- 13 In reading.
  - 14 In primary classes.
    - 15 Aims in view.
      - $1^6$  To convert the child's ear vocabulary into an eye vocabulary.
      - 26 To train the child to facility in recognizing words of familiar meaning on the printed page.
      - 36 To interest the child in getting thought from the printed page.
    - 25 Means and methods.
      - 16 The means are charts, primers, the teacher's writing on the black-board.

Excellent books to use with beginners are "Our Little Book for Little Folks," Am. Book Co.; "The Baldwin Primer," same company.

26 Any method is good that puts the child to read-





ing at once, and wastes no time in teaching the alphabet.

- 24 In intermediate and advanced classes.
  - 15 Aims in view.
    - 16 To secure facility in the mechanics of reading—ready calling of words, correct pronunciation, and clear enunciation, with proper tone and inflection.
    - 26 To lay the foundation of a lasting love of good literature.
  - 25 Means used. Any good series of readers, with plenty of good supplementary reading matter; complete literary masterpieces suited to the advancement of the several grades.

The following are suggested as excellent for supplementary reading:

The American Book Company's "Famous Literature," and "Historical Readers;" D. C. Heath & Company's "Heart of Oak" books, Chicago; Houghton, Mifflin & Co.'s "Riverside Literature" for children, Boston.

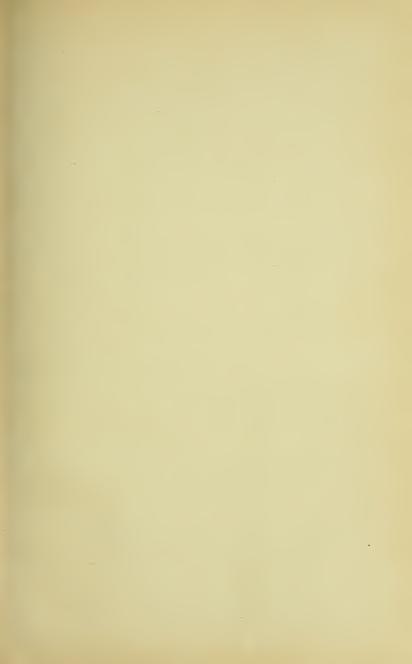
Any series of Readers, different from the ones in regular use, will make excellent supplementary matter.

85 Methods—There need be no "Reader" of the series used above the fourth, and no regular "reading class." The emphasis should be laid now upon the cultivation of a taste for good literature. Classes from the sixth grade up may meet twice a week to discuss the literature read meanwhile. "The boy or girl who loves good literature, and has access to it, is well within the safety zone."

2<sup>3</sup> In spelling.

- 14 Aims in view.
  - $1^5$  To give facility in the acquisition of word forms







through the eye. English spelling cannot be learned through the ear.

25 To cultivate habits of correct pronunciation and clear enunciation.

### 24 Means and methods.

- 15 The writing of words should go along with the reading of them, from the first.
- 2<sup>5</sup> There need be no separate spelling classes and no *spelling book* used below the seventh grade.
- 35 Make every class a spelling-class, every book a spelling-book.
- 45 There should be more written than oral spelling; the first should be taught that the pupil may learn to spell; the second, that he may learn to pronounce and enounce.
- 55 All written work should be closely criticised as to spelling.
  - 56 There should be much use of the dictionary in the last two grades, with special reference to diacriticals.

## 33 In writing.

- 14 Use a vertical system.
- 24 Require special practice at stated periods every day.
- 34 Insist upon good writing in all written exercises.
- 43 In Arithmetic. See "New York Teachers" Monograph," Dec. '99.
  "Report of the Com. of Ten."
  - 14 In primary classes.
    - 15 Aims in view.
      - 16 To secure facility in reading and writing figures.
      - 26 To secure some power and skill in making easy number combinations.
      - 36 To make clear the fact that place gives value to a figure.
    - 25 Means and methods.
      - 16 Drill, objectively, in counting, and in the read-

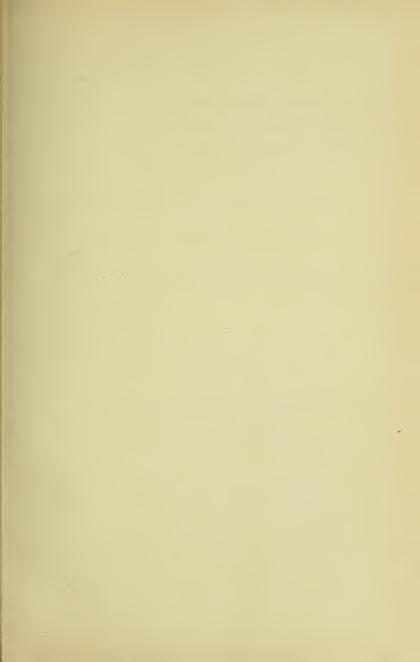


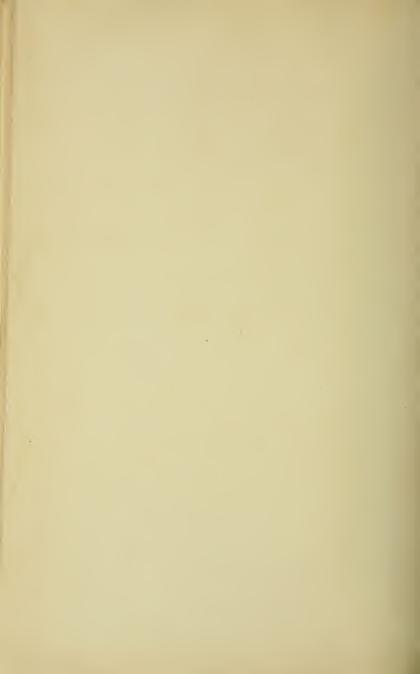




- ing and writing of figures, from the first week of school.
- 26 Incidentally combine number work with other exercises.
- 36 Fully exemplify all new operations by means of objects.
- 46 Make it *objectively* clear that ten *units* make *one ten*; *ten* tens *one* hundred, &c.
- 24 In intermediate and advanced classes.
  - 15 Aims in view.
    - 16 To secure clearness and accuracy of arithmetical thinking.
    - 26 To secure accuracy and rapidity in arithmetical operations—training judgment.
    - 36 To give usable instruction in the arithmetic of common life.
    - 46 When practicable, to give some idea of abstract quantity relations—to introduce a little algebra.
  - 25 Apparatus.
    - 16 U.S. money of familiar denominations.
    - 26 Instruments of measurement—foot-rules, yardsticks; pints, quarts, pecks, &c.; ounce, pound, scales or balances.
    - 36 Card-board figures, made by teacher and pupils, to illustrate solid measure.
    - 46 Blank checks, drafts, notes, &c.
  - $3^5$  Methods and suggestions.
    - 16 Use objects until a process is learned; then discard them.
    - 26 Have the pupils build the various tables themselves—in addition, subtraction, multiplication, denominate numbers, &c.
    - 86 Drill upon the tables until rapid and correct use of them becomes *automatic*,
    - 43 Drill, DRILL upon the fundamental operations







till quickness and accuracy become automatic.

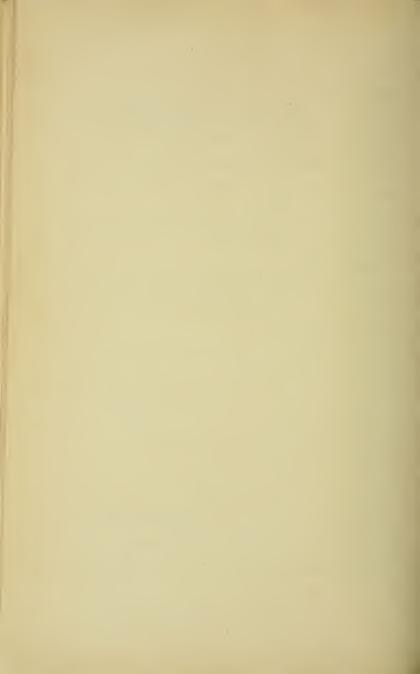
- 56 Pay no attention to rules in the book; have the pupils generalize the rules from the processes of solution.
- 66 Give for practice many problems not found in the text used.
- 76 Have the pupils make and solve many practical problems.
- 86 Fearlessly *omit* a large mass of irrelevant and useless matter from the course shown in the average text-book.

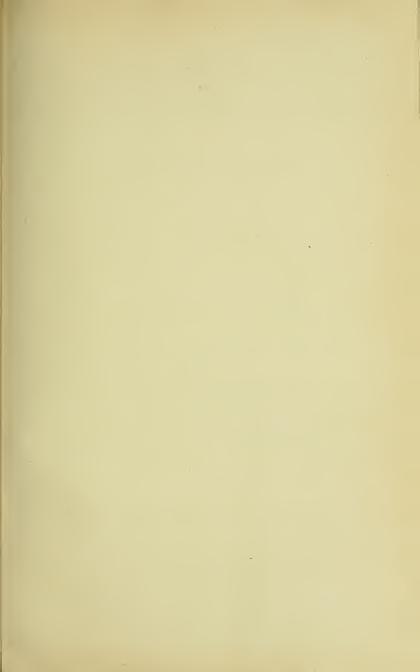
Note:—The ideal arithmetic will have neither rules nor answers in it.

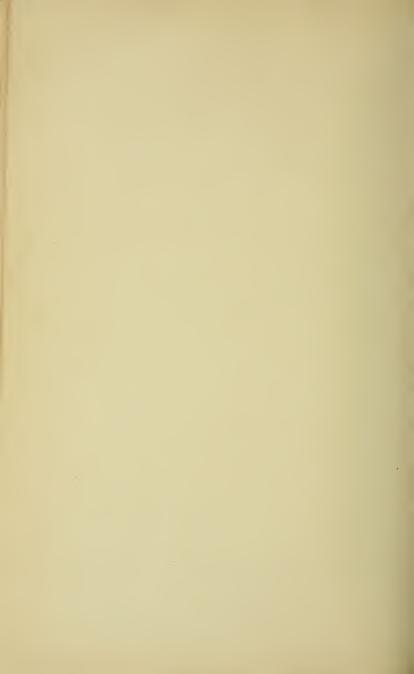
96 Train to quickness of discrimination between the terms granted and the terms required in each problem. Cultivate clearness of analytic processes of solution.

#### 53 In Grammar.

- 14 In primary classes.
  - 15 The aim is to secure fluency and correctness in the use of language.
  - 25 The means and methods are found mainly in the informal talks between teacher and pupils on all themes, especially in nature-study and oral history. There should be incidental correction of the pupil's syntactical errors in speech and writing.
- 24 In intermediate and advanced classes.
  - 15 Technical grammar should not be studied below the highest two grades.
  - 25 The main object should be *training* in the *art* of correct use of language.
  - 35 Illustrations of grammatical forms and usages should be constantly drawn from all printed matter in use, especially the readers.
  - 45 All written work done by pupils should be criticised in syntax.







55 It is not wise to dispense with formal analysis and parsing.

# 63 In Geography.

References:

Long's Home Geography. American Book Co.

New York Teachers' Monograph, June, '99.

How to Study Geography, by Parker. D. Appleton & Co , New York City.

Reports of the Committees of Ten, and Fifteen. Irwin Shepard, Winona, Minn.

See Catalog of March Bros., Lebanon, O., for "Geography Helps."

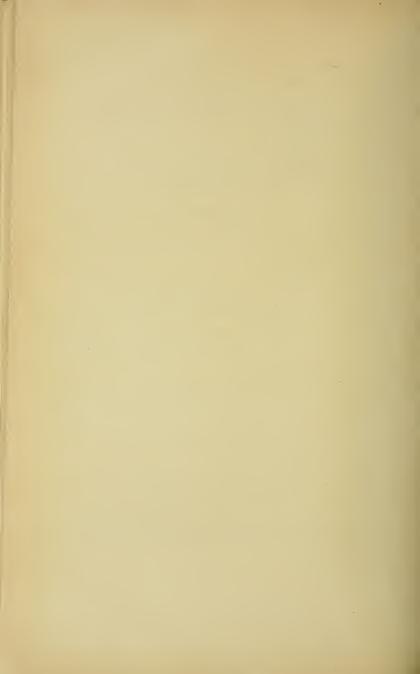
14 In primary classes.

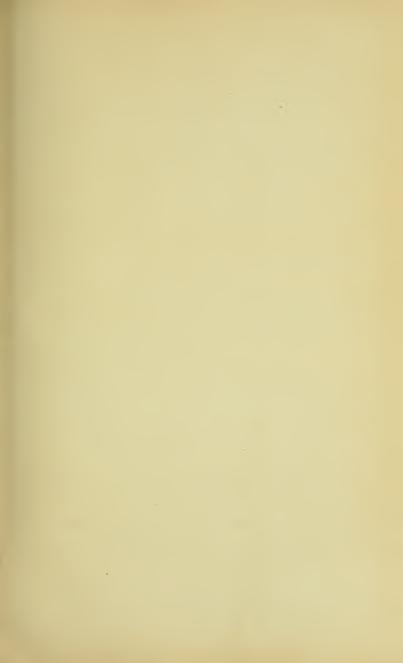
15 Aims in view.

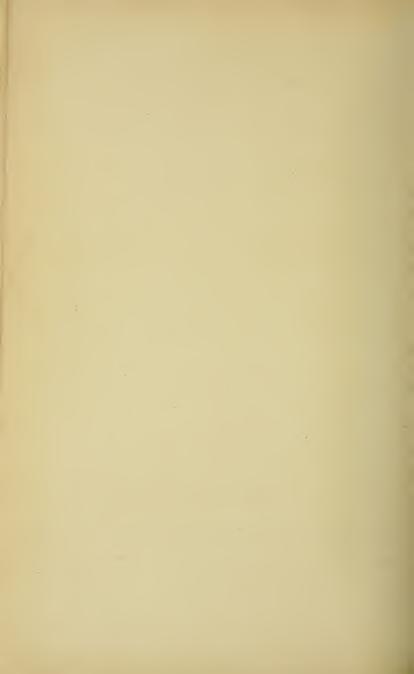
- 16 To familiarize the pupils with forms of land and water, and with geographical terms.
- 26 To correlate other forms of nature-study with geography.
- **8**6 To gather into the pupils' minds the elements out of which they may later build a concept of the earth-whole.

## 25 Means and methods.

- 16 The work should consist mainly of outdoor walks and talks by teacher and pupils, in which hills, valleys, streams; the action of water, ice, wind; the formation of soil, and the growth of plants all form the matter of instruction
- 26 The use of the sand-pile and the mould-board should be frequent.
- 36 In the highest grade of the Primary Division, the use of maps may be begun.
- 24 In intermediate classes the work should be based on the use of one text-book and a small globe; there is no need of two text books in geography. In connection with the study of the text-book there should be







as much geographical reading as possible. (See "Geographical Readers." Am. Book Co.)

34 In advanced classes.

15 The aim is to apply the geography already learned, in the learning of history and more geography.

25 The method is to dispense with a text-book, except for reference, and to use history and "current events," (see below), as the basis of geography teaching. Make it a rule to localize on the map every event read of. In reporting news, have pupils point out on the map the place of each piece of news reported.

Books and articles of travel and description should be used—for example, Lummis' "Some Strange Corners of Our Country."

35 Apparatus—simple globes, wall-maps, railway folders, descriptive advertising pamphlets of resorts and summer and winter tours. The teacher should accumulate an abundant supply of pictures for geography work.

73 United States History.

References:

Methods in History, by Mace. Ginn & Co.

How to Teach and Study History, by Hinsdale. Appleton & Co., New York City.

Methods of Teaching and Studying History. D. C. Heath & Co., Chicago.

Method in Education, by Roark. Am. Book Co.

14 In primary classes.

1<sup>5</sup> Aims in view.

16 To arouse an interest leading to patriotism.

 $2^6$  To aid the growth of character.

36 To impart elementary essential facts regarding the growth of this country.

25 Means and methods.

16 Biographical stories. (See Eggleston's "Stories







of Great Americans for Little Americans," and "Stories of American Life and Adventure," American Book Co. Also, Colerick's "Adventures of Pioneer Children," Robt. Clarke Co., Cincinnati, O.

- 26 Stories of great events.
- 24 In intermediate and advanced classes.
  - 15 Aims in view.
    - 16 To intensify and broaden the results indicated apove.
    - 26 To cultivate civic pride and quicken civic conscience.
    - 36 To impart valuable facts, and to cultivate the *judgment* through assimilation of these facts.
  - 25 Means and methods.
    - 16 Every event taught should be clearly *localized* by the pupils on a map.
    - 26 The pupils should, as a part of the regular work in this subject, draw historical maps, illustrating the courses of discoverers and explorers, the growth of territory, the movements of armies, &c. Ordinary geographical ''outline'' maps, to be had very cheaply of any publisher, are excellent for this purpose.
    - 36 There should be a good deal of collateral reading, investigation of original documents, &c. See "Old South Leaflets," Old South Meeting House, Boston.

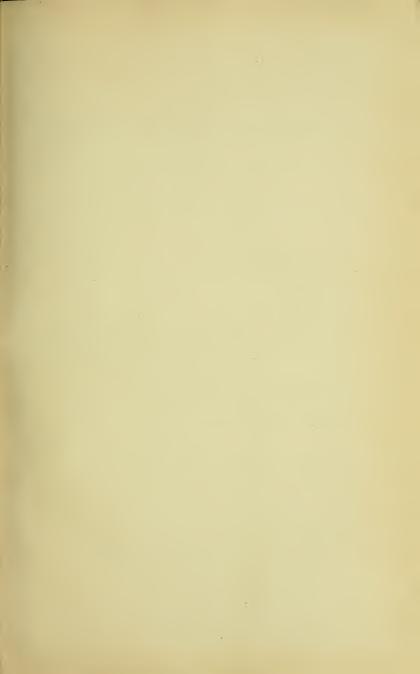
Source Book of American Hist., by Hart. Mac-Millan Co., New York City.

Caldwell's "American History Studies." J. H. Miller, Lincoln, Nebraska.

46 The pupils should be led to inquire into the causes and results of historical occurrences.

Note:—The last intermediate grade and the advanced division should be combined in "current events" work for the bene-







ft, not only of their own classes, but of the whole school. (Roark's ''Method in Education,'' p. 209). The following publications are heartily recommended for use in these exercises:

For the teacher and advanced pupils-

The American Monthly Review of Reviews, N. Y. City. Self-Culture, Akron, Ohio.

Current History, Current Hist. Co., Boston.

The Pathfinder, Washington, D. C.

The Great Round World, New York City.

Educational Independent, Edinboro, Pa.

For the pupils-

The Week's Current, E. O. Vaile, Chicago, Ill. Our Times, E. L. Kellogg, New York City.

Timely Topics, H. R. Pattengill, Lansing, Mich.

For work in history, as well as in geography, the teacher should accumulate a good supply of *pictures*. See Roark's Method in Education, pp. 186, 193, and the catalog of March Bros., Lebanon, Ohio.

83 In Physiology.

14 In primary and intermediate classes.

15 Aims in view.

16 To put the pupils in the right way of living (eating, drinking, sleeping, bathing, exercising) hygienically.

26 To give them elementary facts of anatomy and physiology.

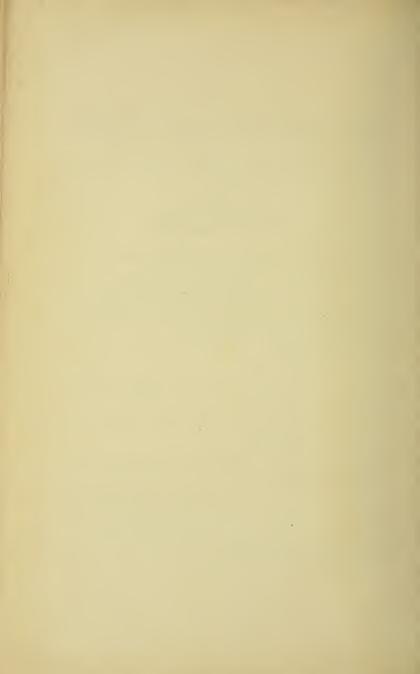
25 Means and methods.

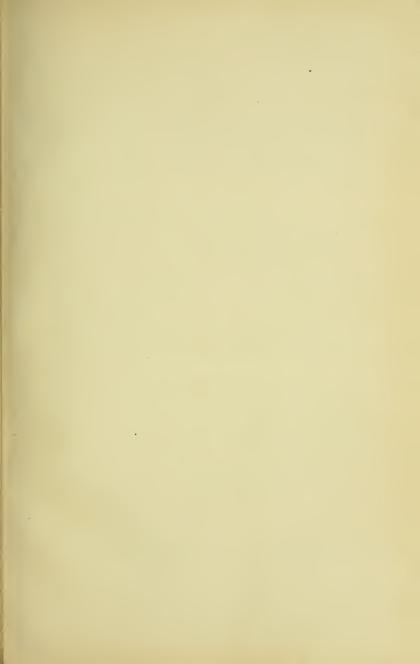
16 Helpful, informal talks by the teacher, with illustrations drawn from the daily habits of the pupil.

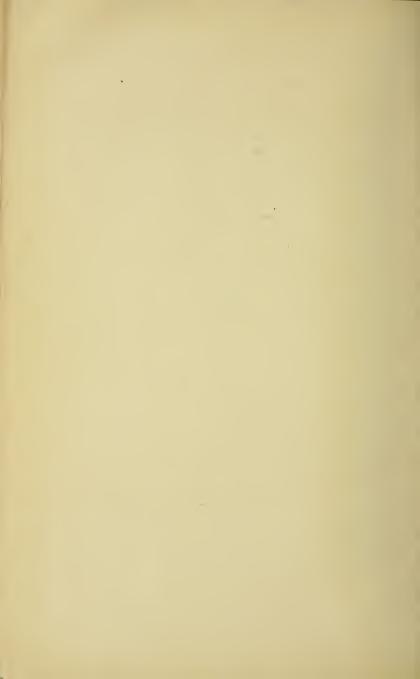
26 Lessons illustrated from the structure and movements of the pupils' own bodies, and from such materials (bones, muscles, tendons, &c.) as the butcher's shop or the dinner basket affords.

24 In advanced classes.

15 Some simple text-book should be mastered.





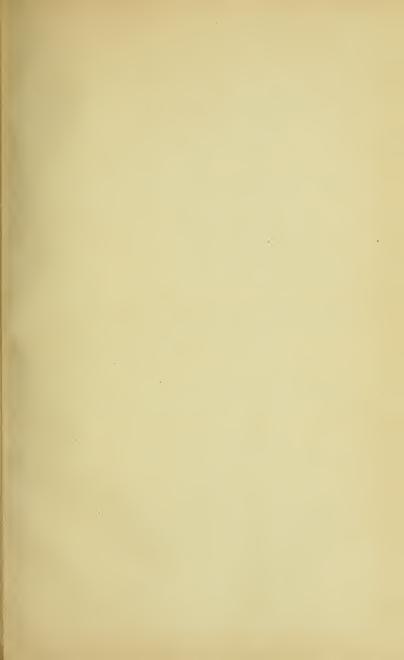


- 2<sup>5</sup> Especial emphasis should be laid on the formation of sound physical habits.
- 35 Much attention should be given to "emergency drills"—i. e., on what to do (and practice in doing it) in case of accidents, such as cuts, burns, sprained or broken limbs, strangling, choking, &c.

## 98 In Civics.

- 14 In primary and intermediate classes.
  - 15 Aims in view.
    - 16 To instill the idea of law and its necessity.
    - 26 To give some notion of the duties and privileges of one who lives among his fellows.
    - 36 To teach the necessity and rightfulness of *obedi*ence to authority.
  - 25 Means and methods. (See Roark's Meth. in Ed., p. 215).
    - 16 Informal but clear and simple talks by the teacher upon the most obvious and familiar evidences of the social organization—the teacher, the trustees (how elected, &c.); policemen, the sheriff, taxes, the court-house, &c.
    - 26 Making clear the duties of the pupils as citizens of the home, the school, the community, the state. Here will be discussed not only what the adult citizen owes his community, but what children can do and should do to make the home, the school, and the community better places in which to live and grow. "Civic leagues" may be formed to help keep streets and roads clean, to set trees along the way-side, &c., &c.
- 24 In advanced classes.
  - 15 Aims in view.
    - 16 To strengthen what was gained from the lowergrade work.
    - 26 To give the pupils some knowledge of the







branches of the federal and state governments, and of the functions of each branch.

- 36 To give them some knowledge of the actual machinery of practical citizenship.
- 46 To inculcate real patriotism.
- 25 Means and methods.
  - 16 Some clear, simple text-book should be mastered.
  - 26 The forms of bills, writs, ballots, &c., should be used in illustrating the proper topics.
  - 36 When possible, pupils should visit and observe the work of legislative bodies and courts.
  - 46 Much illustrative material may be drawn from political campaigns and elections.
  - 56 Model conventions, campaigns, and elections may be held by the pupils, under the teacher's instruction.
  - 66 The study in advanced classes should be constantly illustrated from current happenings. The references given above for "current history" will serve well for this also.

108 In language work.

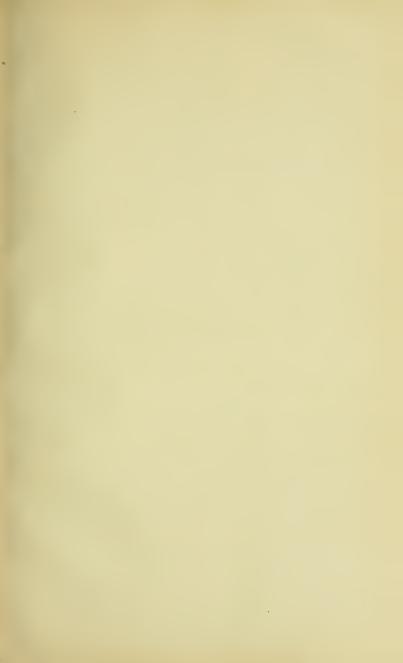
References:

Roark's Psychology in Education, p. 230. Am. Book Co. Roark's Method in Education, p. 282. Same company. Teaching the Language Arts, by Hinsdale. D. Appleton & Co., New York City.

14 Oral.

- 15 In primary and intermediate classes.
  - 16 Aims in view.
    - $1^7$  To cultivate thought and feeling as precedent to expression.
    - 27 To secure fluency, ease, and correctness of oral expression.
    - 37 To intensify impression through expression.
    - 47 To begin a training in the ready use of a most valuable tool.







- 26 Means and methods.
  - 17 Conversations between teacher and pupils upon any subjects in which the pupils may be got to feel an interest.
  - 27 The reading lessons, and the work in naturestudy, geography, history and current events are especially usable in these conversations.
  - 37 The stories told or read by the teacher should be reproduced by the pupils. This reproduction should be in the pupils' own language.
  - 47 Selections from choice literature ("Memory Gems") should be committed to memory and recited by the pupils. (Address March Bros., Lebanon, Ohio, and H. R. Pattengill, Lansing, Mich., for matter suitable to 37 and 47).
- 28 In advanced classes—Forensics. (Roark's Method in Education, p. 318).
  - 16 The aims are the same as in the lower grades.
  - 26 Means and methods.
    - 17 Reading and declamation of choice literature, continued.
    - 27 Debating.
      - 18 Discussions, once or twice a month, of live topics in history and civics, as a part of the regular class work.
      - 28 Formal debates, in the "Forensic Club" (see note below) once in two weeks or oftener.

Note:—The teacher should organize, out of the advanced pupils of his school and the active young people in the community, a "Forensic Club," which shall meet regularly and do earnest work. Such an organization can be made a point of most vital contact between school and community and a means of great good to both.







Refer to "Briefs for Debate." Longmans, Green & Co., New York City.

"Pros and Cons," by Craig. Hinds & Noble, New York City.

## 14 Written.

- 15 Aims in view- the same as those indicated above, except that the exercises are in written expression.
- 25 Means and methods. (See "Training in the Language Arts," by Hinsdale.
  - 16 In the lower grades, the exercises should consist largely of written reproductions of matter told or read to the pupils, or read by them. There may be some original narration or description.
  - 26 In the upper grades, the work may be based on the information gained in history, geography and literature.
  - 3 Punctuation, spelling, and paragraphing should be so drilled upon as to be largely *automatic* by the time the pupil enters the sixth grade.

*Note.*—Expression—oral and written—is an *art*, and facility in an art can be acquired only by *doing*.

113 In nature-study.

## References:

Nature-Study in the Elementary Schools, by Wilson. MacMillan Co., New York City.

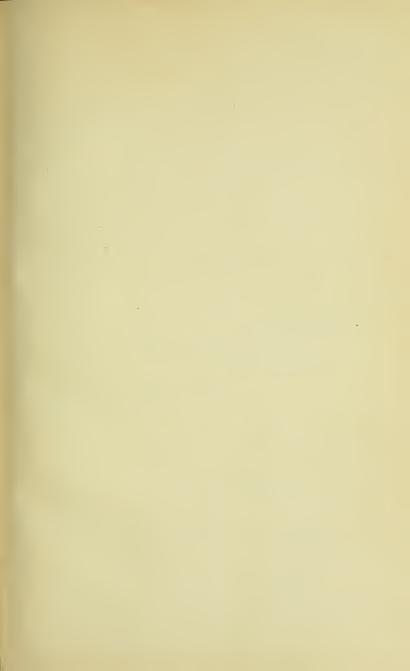
Special Method in Science, by McMurry. Pub. School Publishing Co., Bloomington, Ill.

See catalog of Am. Book Co., for "Nature Study."

Primer of Scientific Knowledge, and First Steps in Scientific Knowledge, by Paul Bert. Lippincott Co., Philadelphia.

Object Lessons. Longmans, Green & Co., N. Y. City. Nature-Study and Related Subjects. W. S. Jackman, Chicago, Ill.







Nature-Study Leaflets, by Hodge. Clark University, Worcester, Mass.

- 14 Aims in view.
  - 15 To cultivate the power of sense observation.
  - 25 To encourage the acquisition of useful facts.
  - 35 To train the judgment through investigation of the "why" and "how."
  - 45 To show that common things are not common-place, but are most interesting.
- 5<sup>5</sup> To cultivate the æsthetic and the ethical natures. 2<sup>4</sup> Suggestions.
  - 15 The chief difficulty is that the teacher is ignorant of, and indifferent to, nature.
  - 2<sup>5</sup> The simplest phenomena, the commonest things, should be used as the basis of the work.
  - 85 Ask "what is it" and "what is its use," in the lower grades; "why" and "how" in upper grades.
  - 4<sup>5</sup> Encourage the collection and preservation of specimens, and the making of simple apparatus for illustrating elementary physics.
  - 55 The work, to be worth anything, should be done mainly out-doors, by the pupils themselves, and without a text-book.

## General Bibliography (selected):

Essay on Education, by Spencer. D. Appleton & Co., New York City.

Practical Hints for Teachers, by Howland. Same address.

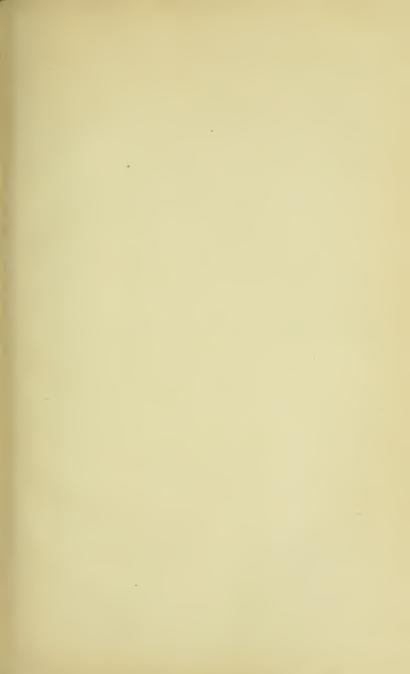
Principles of Education Practically Applied, by Greenwood. Same address.

Locke on Education. (Any supply house).

Elements of Pedagogy, by White. Am. Book Co., Cincinnati, O.

Spirit of the New Education, by Hopkins. Lee & Shepard, Boston.







Talks on Pedagogics, by Parker. E. L. Kellogg & Co., New York City.

Principles of Education, by MacVicar. Ginn & Co., Chicago.

The International Education Series. D. Appleton & Co., New York City.

Page on Teaching. Am. Book Co., Cincinnati, O. The Preston Papers. Hinds & Noble, N. Y. City. Character Building, by Coler. Same address.

The Educational Review, New York City. Home and School Education, Bloomington, Ill.

The Inland Educator, Terre Haute, Ind.

The Journal of Pedagogy, Syracuse, N. Y. Educational papers, published by E. L. Kellogg &

Co., New York City.

New England Journal of Education, Boston.

The Pedagogical Seminary, Worcester, Mass. The Elementary School Record, Univ. of Chicago. School Sanitation and Decoration, D. C. Heath & Co., Chicago.

Bibliography of Education, by Monroe. D. Appleton & Co., New York City.





















